WE CLAIM:

1. A method for manufacturing an optical connector assembly, comprising:

preparing a sealed assembly comprising at least one embedded optical fiber;

polishing an end of said sealed assembly at a predetermined angle to enable a coupling of said optical fiber to an optical device using a total internal reflection to a planar coupling surface located on said sealed assembly;

buffing at least said planar coupling surface of said assembly;

placing said coupling surface on said optical device with said coupling surface abutting a planar window of said optical device; and

using references on said optical device and said assembly to adjust a position of said assembly on said window to achieve said coupling.

2. The method as claimed in claim 1, wherein said preparing said assembly comprises:

providing a substrate having at least one V-groove;

inserting an optical fiber in each of the at least one V-groove provided in the assembly;

providing a coating substance over at least one part of said assembly, in the vicinity of the at least one V-groove; and

sealing the optical fiber in each of the at least one V-groove provided in the assembly using the coating substance and a sheet material provided over said assembly surface to create a sealed assembly.

3. The method as claimed in claim 2, further comprising the step of removing said sheet material.

4. The method as claimed in claim 2, wherein said sheet material is transparent, further comprising the step of partially removing said sheet material.

5. The method as claimed in claim 1, wherein said buffing comprising removing a portion of a cladding of said optical fiber in said assembly, a core of said fiber being essentially adjacent said edge of said assembly, said adjusting comprising observing a position of said core near said edge on said window so as to position said core over a corresponding optical element of said device.

6. The method as claimed in claim 5, wherein the object of observation is a fiducial mark or etching on said edge on said window.

7. The method as claimed in claim 1, wherein the coating substance is light activated, further comprising the step of light activating the light activated substance.

8. The method as claimed in claim 2, wherein the sheet material is a transparent sheet material, said coupling surface being on said sheet material.

9. The method as claimed in claim 2, wherein said at least one v-groove comprises a plurality of fibers inserted in a plurality of parallel V-grooves.

10. The method as claimed in claim 7, wherein the at least one V-groove are etched in silicon.

11. The method as claimed in claim 1, wherein said preparing comprises using a plastic-molding technique to embed said at least one fiber in said substrate.

12. The method as claimed in claim 1, wherein the step of placing said coupling surface over said optical device with said coupling surface abutting a window of said optical device comprises the providing of a transparent sheet of material between said coupling surface and said window of said optical device.

13. The method as claimed in claim 10, wherein the sheet material comprises at least one microlens, said at least one microlens enhancing said coupling between said optical device and said assembly.

14. The method as claimed in claim 10, wherein a microlens is provided on the sheet material at a distance that will enable a capture of all light originating from a corresponding optical fiber and collimate all the light to the optical device.

15. The method as claimed in claim 1, wherein said polishing further comprises providing a reflective coating to replace said total internal reflection.

16. An optical connector comprising:

a sealed assembly comprising at least one channel, each said channel receiving an optical waveguide extending in a lengthwise direction, and having a beveled end at which said waveguide terminates, wherein light from said waveguide is reflected at said end for lateral coupling;

a layer of transparent material disposed between said channel and a side of said connector, said layer including a planar optical coupling surface; and

a microlens positioned on said optical coupling surface to focus light communicated between said waveguide and an optical device.

17. The connector as claimed in claim 16, wherein said at least one channel comprises a plurality of parallel channels.

18. The connector as claimed in claim 16, wherein said beveled end is exposed, said light from said waveguide being reflected by total internal reflection.

19. The connector as claimed in claim 16, wherein said waveguide is an optical fiber.

20. An optical connector comprising:

a substrate having at least one optical fiber embedded near one side of said substrate;

said substrate having a beveled end at which said fiber terminates at a leading edge thereof, wherein light from said fiber is reflected at said end for coupling on said one side; and

said optical fiber having a portion of a cladding removed on said one side to facilitate coupling of said core once alignment between said core and an optical device has been accomplished.

21. The connector as claimed in claim 20, wherein said substrate comprises a chip member comprising at least one V-groove on one side, an optical fiber being bonded in each said V-groove.

22. The connector as claimed in claim 21, wherein said at least one V-groove comprises a plurality of parallel V-grooves.

23. The connector as claimed in claim 20, wherein said beveled end is exposed, said light from said waveguide being reflected by total internal reflection.

24. The connector as claimed in claim 20, wherein said cladding is removed on said one side.